Listing of Claims

This listing of claims replaces all prior versions, and listings, of claims in the application:

Claims 1.-9. (Canceled)

10. (Currently Amended) A device, comprising:

a substantially arbitrary arrangement of contacts, the contacts having a definition characteristic of interference lithography, wherein the contacts have been defined in a substrate by a method that includes

exposing a first resist using interference lithography; ~~and~~

etching ~~the contacts~~ a sacrificial layer using the exposed first resist as a guide;

covering the sacrificial layer with a second resist;

exposing and developing the second resist so that a first portion of the sacrificial layer is uncovered and a second portion of the sacrificial layer remains covered; and

etching the substantially arbitrary arrangement of contacts in the substrate using the first portion of the sacrificial layer as a guide.

11. (Previously Presented) The device of claim 10, wherein the substantially arbitrary arrangement of contacts comprises contacts printed with a pitch approaching one half the wavelength of a patterning electromagnetic radiation.

12. (Previously Presented) The device of claim 10, wherein the substantially arbitrary arrangement of contacts comprises contacts free from defects arising due to one or more of lens imperfections and mask imperfections.

13. (Previously Presented) The device of claim 10, wherein the substantially arbitrary arrangement of contacts comprises contacts free from defects arising due to backscatter of electrons.

14. (Previously Presented) The device of claim 10, wherein the substantially arbitrary arrangement of contacts comprises a portion of a microelectronic device.

15. (Original) The device of claim 14, wherein the portion of the microelectronic device comprises a portion of an SRAM memory device.

Claims 16.-32. (Canceled)

33. (Currently Amended) The device of claim 10, wherein the ~~contacts have~~ first resist has been ~~formed~~ exposed by exposing ~~a~~ the first resist to two substantially orthogonal interference patterns ~~and etching the contacts using the resist as a guide~~.

34. (Currently Amended) The device of claim 33, wherein the ~~contacts have~~ first resist has been ~~formed~~ exposed by exposing the first resist to two substantially orthogonal interference patterns formed using laser beams.

35. (Previously Presented) The device of claim 33, wherein the contacts have a same pitch in the directions of the substantially orthogonal interference patterns.

36. (Currently Amended) The device of claim 10, wherein the ~~contacts have~~ first resist has been ~~formed~~ exposed by a method that includes

exposing ~~a~~ the first resist to an interference pattern of electromagnetic radiation,

rotating the first resist relative to the interference pattern, and

exposing the rotated first resist to the interference pattern~~, and etching the contacts using the resist as a guide~~.

37. (New) The device of claim 10, wherein covering the sacrificial layer with the second resist comprises capping the sacrificial layer with the second resist.

38. (New) The device of claim 10, wherein covering the sacrificial layer with the second resist comprises filling the etched sacrificial layer with the second resist.

39. (New) The device of claim 10, wherein covering the sacrificial layer with the second resist comprises spin coating the second resist on top of the sacrificial layer.

40. (New) The device of claim 10, wherein exposing the second resist comprises exposing the second resist with a pitch that is two or more times as large as the interference lithography pitch.

41. (New) The device of claim 10, wherein exposing the second resist comprises exposing the second resist using a binary optical lithography system.

42. (New) A method comprising:

exposing a first resist using interference lithography;

etching a sacrificial layer using the exposed first resist as a guide;

covering the sacrificial layer with a second resist;

exposing and developing the second resist so that a first portion of the sacrificial layer is uncovered and a second portion of the sacrificial layer remains covered; and

etching a substantially arbitrary arrangement of contacts in a substrate using the first portion of the sacrificial layer as a guide,

wherein the contacts have a definition characteristic of interference lithography.

43. (New) The method of claim 42, wherein exposing the first resist comprises exposing the first resist to two substantially orthogonal interference patterns.

44. (New) The method of claim 43, wherein exposing the first resist comprises forming the two substantially orthogonal interference patterns using laser beams.

45. (New) The method of claim 43, wherein exposing the first resist comprises exposing first resist with the same pitch in the directions of the substantially orthogonal interference patterns.

46. (New) The method of claim 42, wherein exposing the first resist comprises:

exposing the first resist to an interference pattern of electromagnetic radiation;

rotating the first resist relative to the interference pattern; and

exposing the rotated first resist to the interference pattern.

47. (New) The method of claim 42, wherein covering the sacrificial layer with the second resist comprises capping the sacrificial layer with the second resist.

48. (New) The method of claim 42, wherein covering the sacrificial layer with the second resist comprises filling the etched sacrificial layer with the second resist.

49. (New) The method of claim 42, wherein covering the sacrificial layer with the second resist comprises spin coating the second resist on top of the sacrificial layer.

50. (New) The method of claim 42, wherein exposing the second resist comprises exposing the second resist with a pitch that is two or more times as large as the interference lithography pitch.

51. (New) The method of claim 42, wherein exposing the second resist comprises exposing the second resist using a binary optical lithography system.